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**To:** President Clinton
1600 Pennsylvania Avenue
Washington, D.C. 20500

**From:** Áine Skow
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**Subject:** Geological Repository for the Disposal of Spent Nuclear Fuel at Yucca Mountain, Nye County, Nevada

**Date:** February 5, 2000

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As a student at the University of Notre Dame, I became aware of the government's proposal to build a repository site for nuclear waste and other high-level radioactive waste at Yucca Mountain in Nevada through a biomedical ethics class taught by Dr. Kristin Shrader-Frechette. At first glance, the idea of storing radioactive substances in the side of a mountain that is located on a major fault line, near relatively recently active volcanoes, and in close proximity to a large population of people (Las Vegas) seemed to be ludicrous. But now, having read the Draft Environmental Impact Statement (DEIS) submitted by the U.S. Department of Energy (DOE), the idea is downright laughable.

Enclosed please find seven statements that address only the blatantly flawed arguments and logic of the DOE that were found in the DEIS; the lack of thought that lead to the original proposal will not be dealt with. I hope that some constructive criticism from a concerned student will make you think twice about approving the construction of the ethically, ecologically and environmentally flawed repository site at Yucca Mountain.

**7 Statements Against the Yucca Mountain Project**

1. Section 5.7.3 of the 1999 Draft Environmental Impact Statement (DEIS) for the geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste at Yucca Mountain, Nye County, Nevada, was arguably incorrect about the statement "Because the waste package would occupy about 40 percent of the space in a drift, a falling rock would have a 40-percent chance of hitting a waste package," because the statement assumes: 1) that the "space" referred to is an area (as opposed to volume), and 2) the size of the rock. 1

2. The DEIS's conversion of the reference dose for uranium to a threshold concentration (in section 5.6.3) is arguably incorrect because the conversion factor is based upon a 153 pound person, disregarding the lower body weights of the more susceptible population of children. 2

3. In section 5.9, the DEIS is arguably incorrect about the statement "A shift in plant species composition, if any, would be limited to the area within 500 meters of the repository footprint [that is, as much as 8 square kilometers (2,000 acres)], with the greatest change within the central 3 square kilometers (740 acres) for the high thermal load scenario," because it fails to consider that the new heat tolerant plants that out-compete the native species within the aforementioned area, will likely continue to spread beyond this area as its biomass increases, and the chemical reactions carried out by the plant itself could further change the soil composition. This could make it more difficult for native species to thrive. 3

4. Section 5.10 of the 1999 DEIS is arguably incorrect about the following: "The number of cancer fatalities that would normally occur each year in the population in the Amargosa Valley (assuming a population of about 1,150 persons) would be about 2. This number is based on approximately 163 cancer fatalities per year per 100,000 population for males in the United States (NIH 1999, all). This comparison clearly indicates that the human health impacts associated with the Proposed Action would be very small for the population in general." These statements are incorrect because: 1) The EIS bases the result of 2 fatalities per year on statistics that only monitored males, ignoring the other 50% of the population!; and 2) The last sentence, "This comparison clearly indicates that the human health impacts associated with the Proposed Action would be very small for the population in general," assumes that in order to suffer from a "human health impact," a person must die. 4

5. Any of the DEIS's decisions concerning casks, provided that those decisions were based upon the results of the Modal Study, are arguably incorrect because the Modal Study tested a cask with a different 5...

...5 construction from the type of cask proposed for the Yucca Mountain Project (Modal Study, 6-36).

6. Section 6-36 of the Modal Study, cited in the DEIS (1999), is arguably incorrect in its assumption that
6 1) the number of bridges found on Interstate 5 in Orange and Los Angeles counties accurately represents the "average highway conditions" of the entire United States; 2) these numbers collected from a California highway can also be applied to make assumptions about the average conditions of the nation's train routes because: 1) land topography dictates bridge construction, and the entire U.S. is not similar in topography to California; 2) there is no evidence that railway conditions are comparable to those of highways.

7. The EIS is arguably incorrect when it estimates the hazards of spent fuel transportation, because it
7 diminishes the apparent risk by assuming that fuel will be aged 25.8 years, when laws only require fuel to be aged 5 years before transport (DEIS, 1999).